

CRPL-F200 PART B

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PART B
SOLAR - GEOPHYSICAL DATA

ISSUED
APRIL 1961

U. S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS
CENTRAL RADIO PROPAGATION LABORATORY
BOULDER, COLORADO

SOLAR - GEOPHYSICAL DATA

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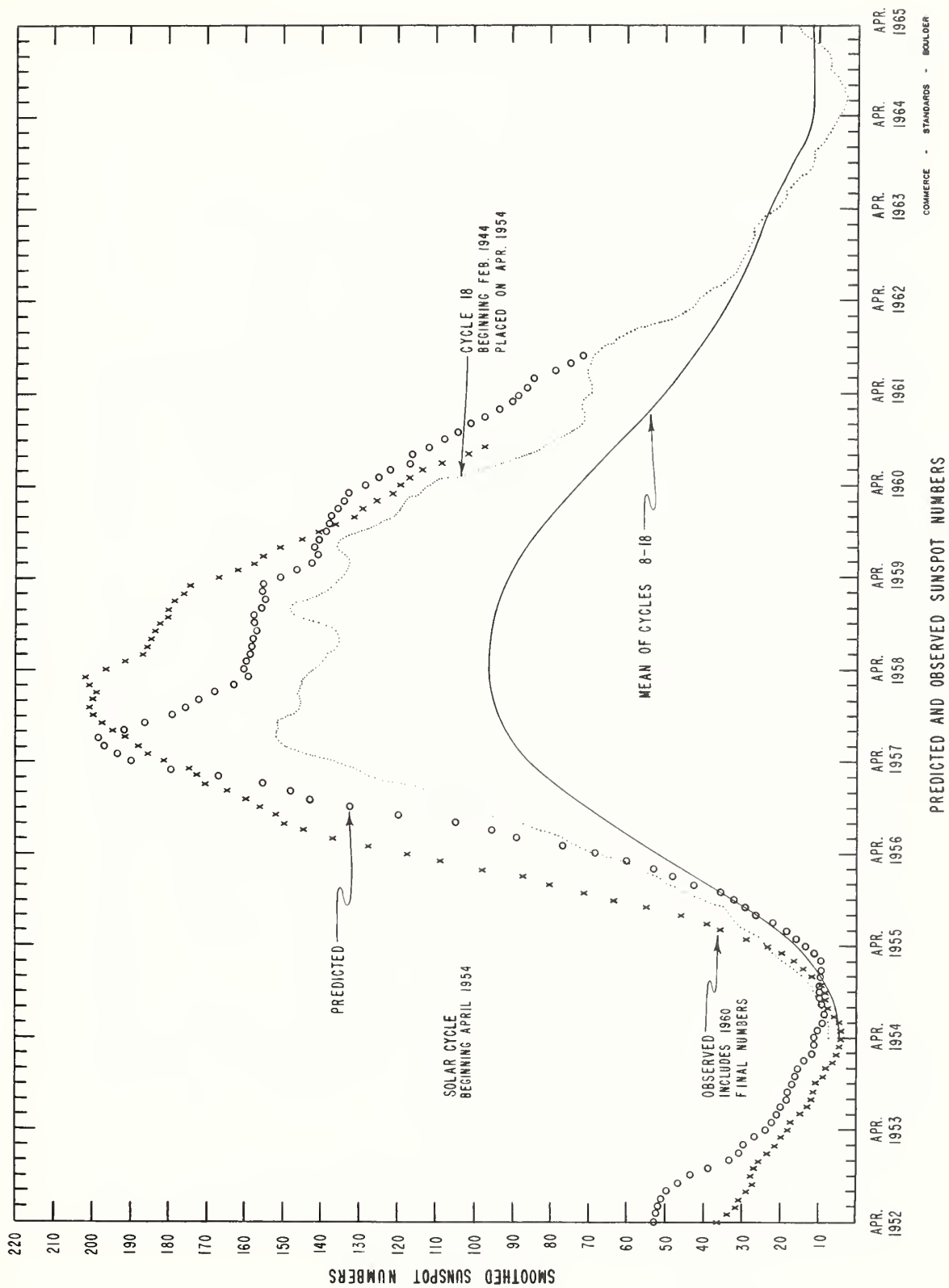
VIII ALERT PERIODS AND SPECIAL WORLD INTERVALS

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The descriptive text was published separately, November 1960.

Feb. 1961	American Relative Sunspot Numbers R_A'
1	61
2	48
3	57
4	60
5	59
6	40
7	42
8	50
9	58
10	48
11	30
12	28
13	20
14	20
15	10
16	13
17	15
18	24
19	24
20	19
21	35
22	43
23	44
24	51
25	45
26	38
27	23
28	18
Mean:	36.5

Mar. 1961	Zürich Provisional Relative Sunspot Numbers R_Z	Daily Values Solar Flux at 2800 Mc, Ottawa, Canada Flux
1	15	103
2	33	103
3	44	104
4	42	96
5	34	94
6	41	93
7	31	95
8	46	94
9	43	90
10	29	91
11	31	98
12	14	92
13	27	93
14	46	91
15	42	98
16	52	99
17	66	98
18	51	101
19	40	102
20	39	105
21	46	105
22	55	106
23	61	110
24	76	116
25	64	118
26	63	121
27	88	125
28	90	126
29	94	126
30	97	125
31	90	117
Mean:	51.3	104



CALCIUM PLAGE AND SUNSPOT REGIONS

MARCH

1961

CMP Mar. 1961	Lat	McMath Plage Number	Return of Region	Calcium Plage Data			Sunspot Data		
				CMP Values Area Int.		History, Age	CMP Values Area Count		History
03.2	N26	6043	*	1400	2.5	$\ell \setminus \ell$ 5	40	4	$b \wedge d$
03.4	N10	6044	6027A	500	1.5	$\ell - \ell$ 2			
04.4	S15	6045	6018	700	1.5	ℓ / ℓ 4			
05.9	N20	6046	6019	500	1	$\ell - \ell$ 10			
07.8	S11	6048	6023	1300	3.5	$\ell - \ell$ 8	100	8	$\ell - \ell$
07.9	N05	6049	6022	1900	3	$\ell - \ell$ 2	190	16	$\ell - \ell$
09.2	S11	6050	6023	600	2.5	$\ell - \ell$ 8			
09.6	N06	6051	6022	1600	2.5	ℓ / ℓ 2			
10.0	S16	6052	6025	400	2	ℓ / ℓ 2	40	1	$\ell \searrow d$
11.0	S17	6053	6025	400	2	$\ell - \ell$ 2			
12.8	N22	6055	New	600	2.5	$b \nearrow \ell$ 1	30	2	$b \nearrow \ell$
14.5	S06	6054	6026	1800	2.5	$\ell - \ell$ 3	200	5	ℓ / ℓ
17.8	N18	6057	6030	1200	2.5	$\ell \searrow d$ 5	10	1	$\ell \searrow d$
18.5	N04	6062	New	700	2.5	$b \nearrow \ell$ 1			
19.2	S23	6058	New	600	2	$\ell - \ell$ 1	50	2	$\ell - \ell$
19.9	N05	6059	New	2600	2.5	$\ell - \ell$ 1	90	1	ℓ / ℓ
21.7	N06	6061	6034	600	3.5	$\ell \searrow d$ 3			
23.1	S13	6060	6036	2300	3	$\ell - \ell$ 2			
24.3	N23	6063	**	1700	2	$\ell - \ell$ 4			
24.8	S22	6064	New	1100	3.5	$\ell - \ell$ 1			
26.1	N09	6065	***	3500	3	$\ell - \ell$ 6 or 1	440	3	$\ell - \ell$
26.3	S11	6067	6042	500	2	ℓ / ℓ 2			
27.0	N18	6066	***	800	2	$\ell - \ell$ 6 or 1			
27.1	N07	6068	****	2000	3	$\ell - \ell$ -	70	3	$\ell - \ell$
28.6	N11	6072	New	100	2	$b \nearrow \ell$ 1			
31.4	S16	6069	New	3000	3	$\ell - \ell$ 1	190	4	$\ell \setminus \ell$
31.7	N23	6073	New	500	1	$b \nearrow \ell$ 1			

*6016,6017

**6037,6038,6039

***Resurgence of 6041

****Merged with 6065

COMMERCE - STANDARDS REQUIRED

PROVISIONAL CORONAL LINE EMISSION INDICES

MARCH 1961

CMP Mar. 1961	North East Quadrant (observed 7 days earlier)					South East Quadrant (observed 7 days earlier)					South West Quadrant (observed 7 days later)					North West Quadrant (observed 7 days later)				
	G ₆	G ₁	R ₆	R ₁	R ₁	G ₆	G ₁	R ₆	R ₁	R ₁	G ₆	G ₁	R ₆	R ₁	R ₁	G ₆	G ₁	R ₆	R ₁	R ₁
1	54	72	7	12		24	28	5	6		28	38	14	16		41	53	14	19	
2	x	x	x	x		x	x	x	x		21	24	9	10		38	50	15	33	
3	44	58	13	32		23	32	4	6		x	x	x	x		x	x	x	x	
4	44	58	21	38		37	50	4	5		x	x	x	x		x	x	x	x	
5	x	x	x	x		x	x	x	x		22	38	10	19		23	29	6	14	
6	43a	47a	x	x		31a	45a	x	x		42	62	26	43		52	84	26	72	
7	31	52	x	x		16	29	x	x		38	88	11	23		49	101	14	41	
8	30	43	6	7		36	63	17	27		x	x	x	x		x	x	x	x	
9	47	73	13	23		45	105	27	38		x	x	x	x		x	x	x	x	
10	x	x	x	x		x	x	x	x		x	x	x	x		x	x	x	x	
11	x	x	x	x		x	x	x	x		x	x	x	x		x	x	x	x	
12	x	x	x	x		x	x	x	x		x	x	x	x		x	x	x	x	
13	40a	62a	9a	12a		43a	52a	11a	16a		x	x	x	x		x	x	x	x	
14	x	x	x	x		x	x	x	x		31a	60a	28a	50a		15a	19a	16a	20a	
15	22	28	19	28		32	73	24	36		17	26	9	10		15	18	9	11	
16	25	33	13	20		11	13	26	33		10	12	6	7		13	19	7	9	
17	x	x	x	x		x	x	x	x		x	x	x	x		x	x	x	x	
18	x	x	x	x		x	x	x	x		x	x	x	x		x	x	x	x	
19	63	110	19	49		37	55	8	10		x	x	x	x		x	x	x	x	
20	64	95	31	72		36	60	11	15		x	x	x	x		x	x	x	x	
21	64	94	14	26		45	101	8	15		42	57	10	18		35	60	3	35	
22	x	x	x	x		x	x	x	x		x	x	x	x		x	x	x	x	
23	63a	90a	x	x		56a	82a	x	x		58	87	x	x		49	78	x	x	
24	x	x	x	x		x	x	x	x		46	57	x	x		x	x	x	x	
25	x	x	x	x		x	x	x	x		x	57	11	23		59	91	12	33	
26	x	x	x	x		x	x	x	x		25	40	13	23		46	65	14	28	
27	x	x	x	x		x	x	x	x		23	31	8	14		38	59	12	18	
28	47a	59a	13a	15a		17a	22a	11a	15a		14	19	6	10		21	24	9	12	
29	38	42	7	9		15	23	10	14		25	36	24	44		25	31	14	26	
30	36	48	8	10		38	68	15	37		x	x	x	x		x	x	x	x	
31	x	x	x	x		x	x	x	x		x	x	x	x		x	x	x	x	

x = no observations a = index computed from low weight data * = yellow line observed

COMMERCE - STANDARDS - BOULDER

SOLAR FLARES
MARCH 1961

OBSERVATORY	DATE MAR 1961	OBSERVED UNIVERSAL TIME		LOCATION		DURA TION — MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS				MAX WIDTH He	MAX INT. Es	PROVISIONAL IONOSPHERIC EFFECT
		START	END	APPROX. LAT.	MER DIST.				M-MATH PLAGE REGION	TIME U T	MEAS AREA Sq. Deg.	CORR AREA Sq. Deg.			
WENDEL	05	1156	1228	S08 E30		6048	1+				6.00				
	06	0849	0914	N03 E13		6049	1				4.00				
	06	1250	1312 D	S08 E17		6048	22 D				4.00				
	06	1320	1336	N01 E13		6049	16	1	4	1024	3.00	3.00			
LOCARNO	07	0740 E	0755	S10 E06		6048	15 D	1							
	07	0820	0839	S12 W32		6045	19	1							
{ UCCLE ONDREJOV WENDEL CAPRI S	09	1027	1045	S08 E67		6054	18	1	3	1028	2.00	4.00	2.80		
	09	1027 E	1045 D	S08 E68		6054	18 D	1	3	1028					
	09	1028 E	1055	S07 E65		6054	27 D	1			4.00	4.00			
	09	1029 E	1115 D	S07 E66		6054	46 D	1	3	1030	1.20	3.30			
{ LOCARNO WENDEL AROSA	11	1240	1300	S07 E40		6054	20	1	1			3.00			
	11	1242	1301	S06 E40		6054	19	1							
	11	1251	1255	S07 E40		6054	4	1							
CAPRI S LOCARNO	14	0730 E	0820 D	N20 E46		6057	50 D	1	3	0730	2.00	3.00			
	14	1350	1405	N19 E42		6057	15	1	1						
WENDEL	16	1640 E	1700 D	N04 E35		6059	20 D	1				3.00			
	18	0555 E	0614	N04 E15		6059	19 D	1	2	0652		2.40			
	18	1315 E	1330	S05 W60		6054	15 D	1	1						
	18	1604	1715	N19 W13		6057	71	1	2	1615		2.20			
{ WENDEL LOCKHEED	18	1608	1624 D	N20 W12		6057	16 D	1+	2			7.00		30	
	18	1738	1810	N06 E07		6059	32	1+	2	1742	2.30	2.30			
	20	1043	1117	S13 E28		6060	34	1	2	1046	3.00	3.00		20	
	20	2044	2055	N21 E85		6066	11	1	2	2047	.80	2.40			
LOCARNO ARCETRI LOCARNO	22	0845	0905	N10 E53		6065	20	1	3						
	22	0850 E	0900 D	N11 W52		6062	10 D	1	3						
	22	1451	1502	N10 E50		6065	11	1	3						
	23	1202	1218	N11 E34		6065	16	2	3	1205	8.00	9.60			
{ CAPRI S AROSA ZURICH	23	1202 E	1218	N09 E33		6065	16 D	1+	3	1206	4.00	5.00			
	23	1203	1220	N14 E31		6065	17	1+							
	23	1217 E	1236 D	N03 W29		6059	19 D	1	2	1219		3.00			
	24	0840 E	0850	N10 E25		6065	10 D	1	2						
{ UCCLE LOCARNO WENDEL ZURICH CAPRI S ARCETRI AROSA	24	0848	0919	N12 E25		6065	31	1	2	0852	2.50	2.50			
	24	0851	0920	N12 E26		6065	29	1	2						
	24	0854	0928	N10 E21		6065	34	1+	2						
	24	0855	0917	N13 E23		6065	22	1	2	0855		7.00			
	24	0856	0917	N10 E25		6065	21	1	3	0904	3.00	2.00			
	24	0859 E	0915 D	N14 E23		6065	16 D	1	3			3.50			
	24	0900 E	0918	N12 E22		6065	18 D	1							
	25	0707 E	0732 D	N02 W52		6059	25 D	1	3	0711	1.50	2.60			

SOLAR FLARES

MARCH 1961

OBSERVATORY	DATE MAR 1961	OBSERVED UNIVERSAL TIME		LOCATION			DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS		MAX. WIDTH H α	MAX. INT. %	PROVISIONAL IONOSPHERIC EFFECT
		START	END	APPROX. LAT.	MER. DIST.	MCARTH PLACE REGION				TIME — U.T.	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.		
{ ZURICH WENDEL ARCETRI AROSA CAPRI S	25	0745	0807	S17 E88		6069	22	1	2	0745		4.00		
	25	0739	0912	N20 E16		6066	93	1+				7.00		
	25	0815	0840 D	N19 E20		6066	25 D	1	3	0829	2.00	2.30		
	25	0818	0840	N16 E21		6066	22	1						
	25	0821	0842 D	N14 E18		6066	21 D	1	3	0837	3.50	4.00		
	25	0953	1010	S18 E89		6069	17	1	2	0953		2.00		
	25	0953	1010 D	S14 E90		6069	17 D	1	3					
	25	1000	1015	S17 E85		6069	15 D	1	2					
	25	1029	1051	S19 E87		6069	22 D	1+				5.00		
	25	1205	1220	S13 E79		6069	15	1+				6.00		
{ WENDEL LOCARNO WENDEL WENDEL LOCKHEED LOCKHEED	25	1205	1220	N10 E19		6068	16 D	1+				5.00		
	25	1244	1305	N11 E19		6068	21	1	2					
	25	1405	1418 D	S12 E77		6069	13 D	1				3.00		
	25	1502	1531 D	N04 W56		6059	29 D	1				3.00		
	25	1547	1605	S20 E90		6069	18	1	1	1553	1.00	5.00	10	
	25	1704	1725	S16 E85		6069	21	1	1	1707	1.00	2.50	10	
	26	1009	1130	S17 E75		6069	81 D	3	3	1033		9.00	6.00	
	26	1012	1133 D	S16 E70		6069	81 D	2+	1	1045	3.00			
	26	1015	1025	S15 E73		6069	10	1						
	26	1015	1110 D	S15 E72		6069	55 D	2+	1	1040		15.00		
{ WENDEL SCHAUINS AROSA NEDERHORST UCCLE WENDEL LOCKHEED	26	1017	1150 D	S15 E71		6069	93 D	3	1			22.00		
	26	1022	1102 D	S15 E72		6069	40 D	2+	1			10.00		
	26	1026	1115	S15 E73		6069	49	2						
	26	1036	1042	S15 E76		6069	6 D	3						
	26	1059	1114 D	S15 E85		6069	15 D	3	2					
	26	1435	1502 D	N01 W76		6059	27 D	1						
	26	1600	1630 U	S19 E80		6069	30 U	1	1	1612	.80	4.00	10	
	27	0910	0915 D	N05 W90		6059	5 D	3	3					
	27	1416	1425	S13 E55		6069	9	1		1418	3.00	4.00		
	27	1416	1450 D	S15 E59		6069	34 D	1	3	1423	1.50	3.00		
{ SAC PEAK LOCKHEED UCCLE WENDEL SAC PEAK ZURICH SAC PEAK UCCLE SAC PEAK UCCLE	27	1813	1941 D	S16 E52		6069	88 D	2	2			5.78	25	
	27	1836	1928	S15 E50		6069	52	1	1	1850	2.00	2.50	20	
	28	0954	1035	N08 W21		6068	41	1	4	1001	2.00	2.00		
	28	1000	1015 D	N07 W19		6068	15 D	1				3.00		
	28	1416	1510	S24 W53		6064	54	1	3		2.89	3.80	22	
	28	1418	1449 D	S22 W56		6064	31 D	1	3	1430	3.50	4.80		
	28	1429	1440	S25 W52		6064	11 D	1	2	1429		2.00		
	28	1436	1512	S13 E43		6069	36	1	3		2.02	2.33	21	
	28	1449	1506	S12 E43		6069	17 D	1	3	1458	3.00	4.00		
	28	1628	1655	S17 E43		6069	27	1	3		1.94	2.23	25	
{ LOCARNO LOCARNO CAPRI S STOCKHOLM ZURICH LOCARNO	28	1629	1655	S16 E43		6069	26	1+	3	1633	4.50	6.00		
	29	0720	0810	S14 E33		6069	50 D	1	1					
	29	0720	0830	S08 E64		6074	70 D	1+	1					
	29	1121	1230 D	S11 E28		6069	69 D	1	3	1159	3.00	3.50		
	29	1138	1210 D	S15 E30		6069	32	1	3	1200	5.00	6.00		
	29	1255	1306	S12 E27		6069	11	1	2	1255		2.00		
	29	1430	1515	S12 E26		6069	45	1	1					

SOLAR FLARES

MARCH 1961

OBSERVATORY	DATE MAR 1961	OBSERVED UNIVERSAL TIME		LOCATION			DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS				PROVISIONAL IONOSPHERIC EFFECT		
		START	END	MAX PHASE	APPROX	LOCATION				TIME U.T.	MEAS AREA Sq Deg	CORR AREA Sq Deg	MAX WIDTH H ₃₀		MAX INT °	
						LAT.										NER DIST REGION
{ CAPRI S HAWAII LOCKHEED	29	1557 E	1615 D	S13 E34	6069	18 D	1	3	1608	2.00	2.40					
	29	2052	2320	S13 E22	6069	148	1	3	2300	3.70	3.70					
	29	2253	2323	S11 E24	6069	30	1	2	2259	3.10	3.10		20			
MC MATH	30	1848	1930 D	S13 E11	6069	42 D	1	2	1910		2.50					

COMMERCE - STANDARDS - BOULDER

E = LESS THAN
D = GREATER THAN
U = APPROXIMATE
□ = NOT REPORTED

CAPRI G ANACAPRI - GERMAN
CAPRI S ANACAPRI - SWEDISH
GOOD HOPE ROYAL OBSERVATORY, CAPE OF GOOD HOPE
KIEV* KIEV UNIVERSITY
KODAIKANAL KODAIKANAL
KRASNAYA KRAVNAYA PAKHRA
LOCKHEED LOS ANGELES

MC MATH MCMATH-HULBERT
MOSCOW-G MOSCOW - GAISH
R O HERST ROYAL GREENWICH OBSERVATORY,
HERSTMONCEUX
SAC PEAK SACRAMENTO PEAK
SCHAUINS SCHAUINSLAND
WENDEL WENDELSTEIN

ALL VALUES IN THE MAXIMUM INTENSITY COLUMN FOR SAC PEAK ARE ARBITRARY UNITS (0-40) AND FOR LOCKHEED ARE ARBITRARY UNITS (10-40), NOT PERCENT OF CONTINUOUS SPECTRUM.

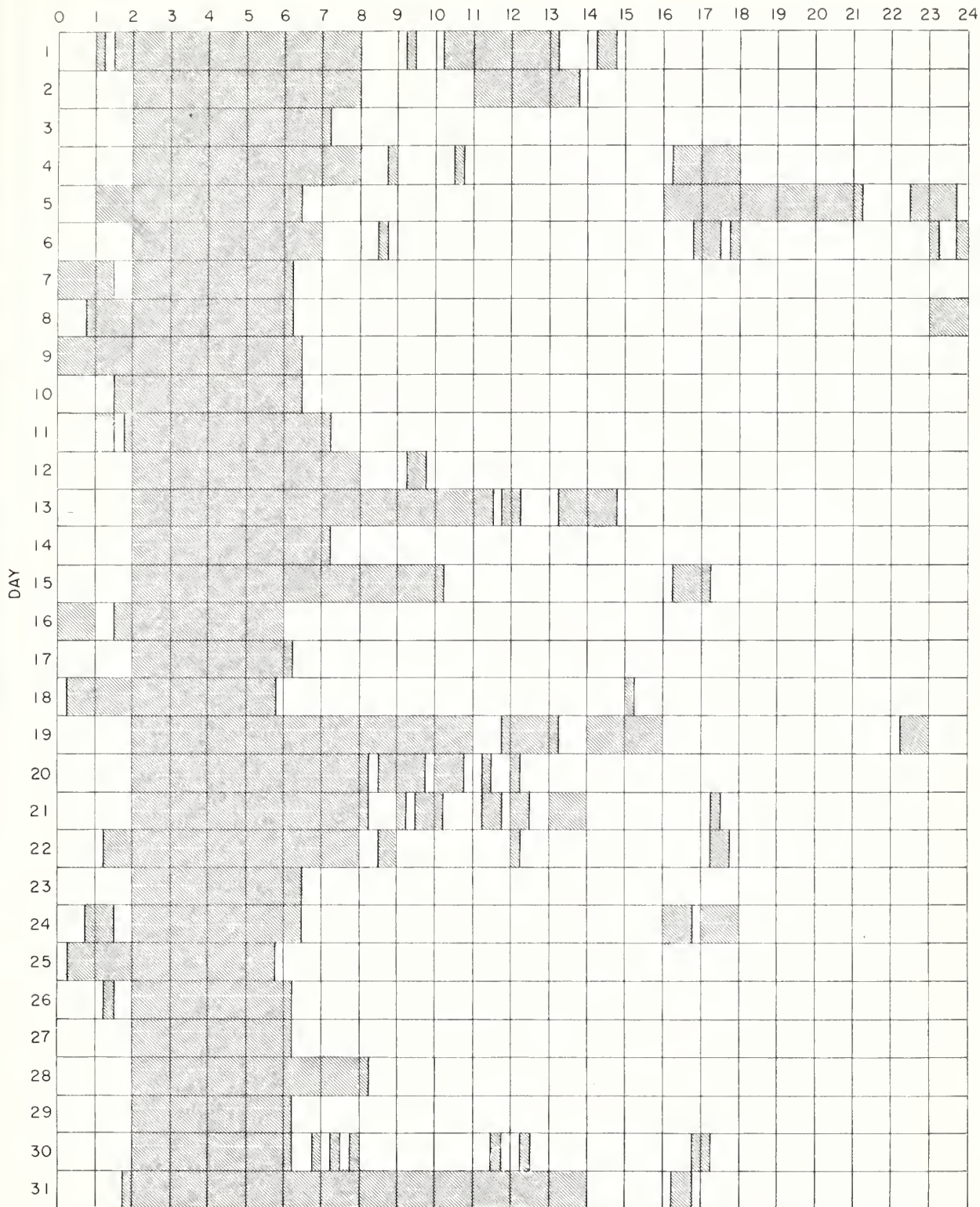
SEE DESCRIPTIVE TEXT PUBLISHED NOVEMBER 1960 FOR DEFINITION OF CORR. AREA VALUES LISTED FOR CLIMAX, HAWAII, LOCKHEED AND SAC PEAK.

INTERVALS OF NO FLARE PATROL OBSERVATIONS

111d

MARCH 1961

HOUR-UT



Stations Include:

Anacapri (Swedish)
Arcetri

Climax
Hawaii

Huancayo
Lockheed

McMath-Hulbert
Ondrejov

Sacramento Peak
Uccle

COMMERCE - STANDARDS - BOULDER

SOLAR FLARES

DECEMBER 1960

OBSERVATORY	DATE	OBSERVED UNIVERSAL TIME		LOCATION			DURA- TION — MINUTES	IN- POR- TANCE	OBS COND.	MEASUREMENTS				PROVISIONAL IONOSPHERIC EFFECT	
		START	END	APPROX. LAT.	MER. DIST.	MC-MATH PLACE REGION				TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX WIDTH Hc		MAX. INT. °s
MITAKA GOOD HOPE	DEC 1960														
	01	0044 E	0056	N15 W12	N26 E85	5956	12 D	1	1	0046	3.44	3.65	2.08	107	
{ MITAKA MITAKA ALMA-ATA MITAKA ALMA-ATA KIEV	01	1004	1020				16	1		1006	.60				
	02	0156	0212	N16 E21		5954	16	1	1	0158	1.47	1.67	2.18	102	
	02	0301 E	0311	N16 W26		5948	10 D	1	1	0301	.98	1.15	1.95	134	
	02	0514	0520	N21 W32		5948	6	1	1	0516	1.75			52	
	02	0520 E	0527	N11 W30		5948	7 D	1	1	0522	.98	1.13	1.86	113	
	02	0547	0617	N16 W28		5948	30	1	1	0552	2.68			52	
{ SIMEIZ GOOD HOPE	02	1119 E	1130 D	N15 W31		5948	11 D	1	1	1121	1.75			60	
	03	0731 E	0750 D	N09 W48		5948	19 D	1	1	0734	1.07			73	
{ MEUDON GOOD HOPE GOOD HOPE GOOD HOPE MEUDON	04	0913	0929	N09 W60		5948	16	1		0919	1.10	2.40			
	04	0920	1000	N10 W40		5950	40	1				4.00			
	04	0921	0957	N12 W38		5950	36	1		0926	1.80	2.40			
	04	1248	1305	N09 W69		5948	17	1		1254	.90	2.50			
	04	1250	1306	N07 W78		5948	16	1							
	05	0154	0218	N27 E66		5957	24	1	1		1.62			60	
{ ABASTUMANI ABASTUMANI GOOD HOPE GOOD HOPE GOOD HOPE	05	0618	0824	N29 E80		5952	126	1+	3		2.25	9.40		66	
	05	0631	0634 D	N27 E70		5959	12 D	1+	3		2.52	5.40		80	
	05	1120	1139	N10 W78		5948	19	1		1127	1.10				
	05	1144	1234	N09 W76		5948	50	2		1155	2.20				
	09	1142	1155	S03 W87		5953	13	1		1146	1.40				
	10	0638	0649	N25 E03		5959	11	1	3		1.80	2.10		62	
GOOD HOPE	14	1138	1252	N27 W51		5955	74	1+		1143	2.60	4.80			
	14	1321	1345	N27 W53		5959	27	2		1327	4.40	8.60			
MITAKA	15	0026	0049	N27 W67		5959	23	1	2	0028	.98	11.03	2.63	120	
	15	0323	0401	N24 W61		5955	37	1+	2	0331	6.88		2.81	131	
MITAKA	17	0325 E	0329	N14 E40		5970	4 D	1	1	0325	1.47	2.12	2.17	134	
	19	0234	0253	S15 W20		5967	24	1	1	0238	1.47	1.58	3.03	165	
{ MITAKA MITAKA PIRCULI PIRCULI ABASTUMANI PIRCULI GOOD HOPE	19	0620	0640	S15 W55		5960	10	1	1	0620	.79	2.09	1.44	113	
	19	0737	0748	N19 W70		5961	11	1	2	0745	1.09	3.76		50	
	19	0745	0751	S16 W56		5960	6	1	2	0747	1.73	3.42		50	
	20	0833	0916 D	S17 W75		5960	12 D	2	3		2.70	8.80		92	
{ PIRCULI GOOD HOPE	20	0840	0848	S16 W73		5960	20	2	2	0848	3.19	16.30		70	
	20	1158	1237	S15 W78		5960	35	1		1203	.60				
MITAKA	21	0248	0315	N16 W90		5961	27	1	1		2.66	2.95		52	
	21	0808	0815	S22 W09		5973	7	1	2	0812					
PIRCULI	22	1013	1013	S21 W24		5973	10	1	2	1016	2.00	2.36		50	
	25	0922	0940 D	N15 E81		5983	18 D	1	2	0924	.91	4.64		50	

SOLAR FLARES

DECEMBER 1960

OBSERVATORY	DATE	OBSERVED UNIVERSAL TIME		LOCATION		DURA- TION — MINUTES	IM POR- TANCE	OBS COND.	MEASUREMENTS				PROVISIONAL IONOSPHERIC EFFECT
		START	END	LAT.	APPROX. MER DIST				TIME — UT	MEAS. AREA Sq Deg.	CORR. AREA Sq Deg.	MAX. WIDTH H _g	
MITAKA PIRCULI	26 DEC 1960	0144 F	0147	N13 E82	5983	3 D	1	1	0144	0.49		3.47	
		0828 F	0913 D	N17 E72	5983	45 D	1+	2	0842	2.28	7.84		50
MITAKA	27	0514 E	0539 D	N12 F61	5983	25 D	1	1	0514	0.79	1.90	2.31	149
{ PIRCULI	28	0734 F	0810 D	N16 E47	5983	36 D	1	2	0744	1.37	2.14		51
{ GOOD HOPE	28	0747	0759	N19 E48	5983	12	1		0750	1.60	2.50		
{ PIRCULI	28	0755 F	0802 D	N18 E48	5983	67 D	1	2	0836	2.73	4.39		53
{ MEIDON	28	0800 E	0830	N15 E48	5983	30 D	1						
MITAKA	30	0141	0148	N14 F25	5983	7	1	1	0141	1.98	2.31	3.48	140
{ MITAKA	30	0344	0400	N15 F21	5983	16	1	1	0348	0.98	1.17	2.17	149
{ KODAIKAWA	30	0452 E	0415 D	N15 F23	5983	23 D	3	3	0406	19.30	22.00	1.88	122
MITAKA	30	0403	0420	N13 F25	5983	17	1	1	0404	1.47	1.75	2.06	149
{ MITAKA	30	0424 F	0442	N18 F24	5983	18 D	1	1	0424	0.49	0.59	1.54	110
{ MITAKA	30	0424 E	0444 D	N15 F23	5983	20 D	1	1	0424	0.98	1.18	1.75	113
{ MITAKA	30	0424 E	0512	N15 E21	5983	48 D	1	1	0445	1.97	2.34	2.27	122
ABASTUMANI	30	0616	0639	S14 E50	5985	23	1	1	0424	1.47	1.87	2.38	122
GOOD HOPE	30	0656	0738	N18 E28	5983	42	1	2	0703	3.16	5.00		62

COMMERCE - STANDARDS - BOULDER

These flare reports are addenda to the December 1960 flares published in CRPL-F 197 Part B, January 1961.

E = LESS THAN	CAPRI G	ANACAPRI - GERMAN	MCNATH	MCNATH-HULBERT
D = GREATER THAN	CAPRI S	ANACAPRI - SWEDISH	MOSCOW-G	MOSCOW - GAISH
U = APPROXIMATE	GOOD HOPE	ROYAL OBSERVATORY, CAPE OF GOOD HOPE	R O HERST	ROYAL GREENWICH OBSERVATORY,
□ = NOT REPORTED	KIEV*	KIEV UNIVERSITY		HERSTMONCEUX
	KODAIKAWA	KODAIKAWA	SAC PEAK	SACRAMENTO PEAK
	KRASNOYA	KRASNOYA PAKHRA	SCHAUINS	SCHAUINSLAND
	LOCKHEED	LOS ANGELES	WENDEL	WENDELSTEIN

ALL VALUES IN THE MAXIMUM INTENSITY COLUMN FOR SAC PEAK ARE ARBITRARY UNITS (0-40) AND FOR LOCKHEED ARE ARBITRARY UNITS (10-40), NOT PERCENT OF CONTINUOUS SPECTRUM.

SEE DESCRIPTIVE TEXT PUBLISHED NOVEMBER 1960 FOR DEFINITION OF CORRECTED AREA VALUES LISTED FOR CLIMAX, HAWAII, LOCKHEED AND SAC PEAK.

Errata:

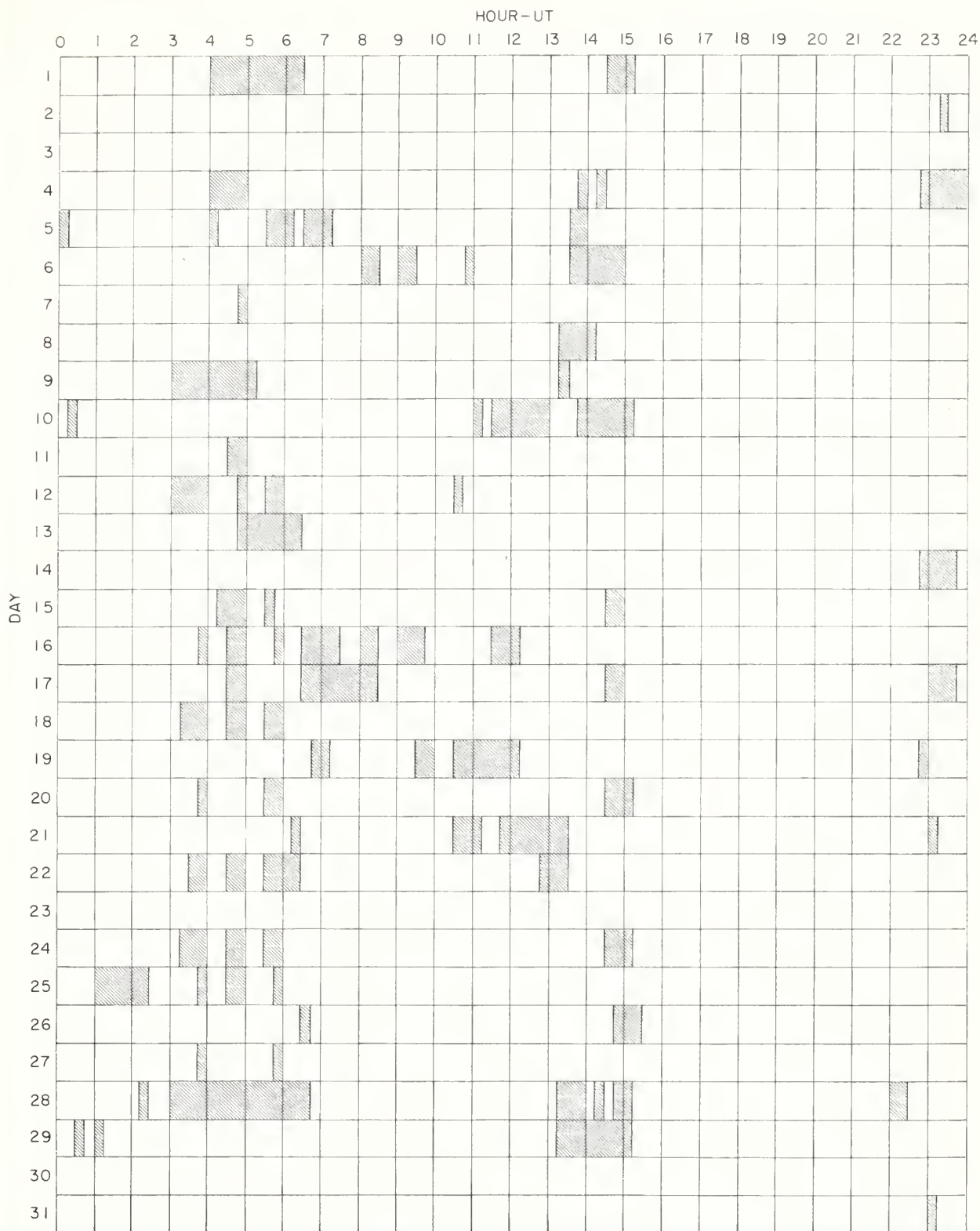
For the flare observed at Sacramento Peak December 5, 1960 from 1832-2158D and published in CRPL-F 197 Part B, January 1961, page IIIa, areas should be changed as follows: Measured from 27.42 to 9.92 square degrees and the corrected from 136.13 to 18.75 square degrees.

In the table of "Intervals of No Flare Patrol" for August 1960 published in CRPL-F 196 Part B, December 1960, the following corrections should be made: August 30 hours should read from 0000-0300; August 31 should be added and left blank for all hours.

INTERVALS OF NO FLARE PATROL OBSERVATIONS

DECEMBER 1960

IIIh



COMMERCE - STANDARDS - BOULDER

SOLAR FLARES

JUNE 1959

OBSERVATORY	DATE	OBSERVED UNIVERSAL TIME		LOCATION			DURA- TION — MINUTES	IM- POR- TANCE	OBS COND.	MEASUREMENTS					PROVISIONAL IONOSPHERIC EFFECT	
		START	END	APPROX.	LAT.					MCMATH PLACE REGION	TIME — UT	MEAS. AREA Sq Deg	CORR. AREA Sq Deg	MAX. WIDTH Ho		MAX. INT %
UCCLF	07	1101		S06 W44		S170	□	1	4						S-SWF	
UCCLF	19	1632	1656 D	N15 W30		S204	24 D	1+	2						S-SWF	
UCCLF	22	1013	1125	N20 W67		S204	72	2	3						S-SWF	
UCCLF	23	1103	1114	N20 E65		S228	11	1	2						S-SWF	

COMMERCE - STANDARDS - BOULDER

These flares are addenda to the June 1959 flares published in CRPL-F 179 Part B, July 1959; F-182 Part B, October 1959 and F-185 Part B, January 1960.

IONOSPHERIC EFFECTS OF SOLAR FLARES

IIIj

{SHORT-WAVE RADIO FADEOUTS}

FEBRUARY 1961

(NONE OBSERVED)

IONOSPHERIC EFFECTS OF SOLAR FLARES

(Sudden Cosmic Noise Absorption
Sudden Enhancements Of Atmospherics
Solar Noise Bursts At 18 Mc.)

FEBRUARY 1961

(NONE OBSERVED)

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

MARCH 1961

OTTAWA

2800 MC

Mar. 1961	Type*	Start UT	Duration Hrs:Mins	Maximum		Mean Flux	Remarks
				Times UT	Peak Flux		
18	7 Period Irregular Activity	1738.5	8.5	1741.5	15	5	
	4 Post Increase		25		2	1	
28	1 Simple 1	1441	4	1442.5	5	1.7	
29	2 Simple 2	1831.8	1.2	1832.2	9	3.5	
29	1 Simple 1	2041	1	2041.5	2	1	
30	3 Simple 3	1607	20	1610	5	3	
30	2 Simple 2	1902	4	1903	13	7	
	4 Post Increase		10		2	1	

COMMERCE - STANDARDS - BOULDER

HOURS OF OBSERVATION: JANUARY, FEBRUARY, MARCH 1961

OBSERVING PERIOD:

January 1325 UT - 2125 UT (approx.)

February 1235 UT - 2200 UT (approx.)

March 1200 UT - 2245 UT (approx.)

with the following exceptions:

- (1) Observations commenced: March 4 - 1345
 March 5 - 1240
 March 25 - 1400
 March 26 - 1240
 March 27 - 1225

- (2) Interference obscuring portions of the records on:

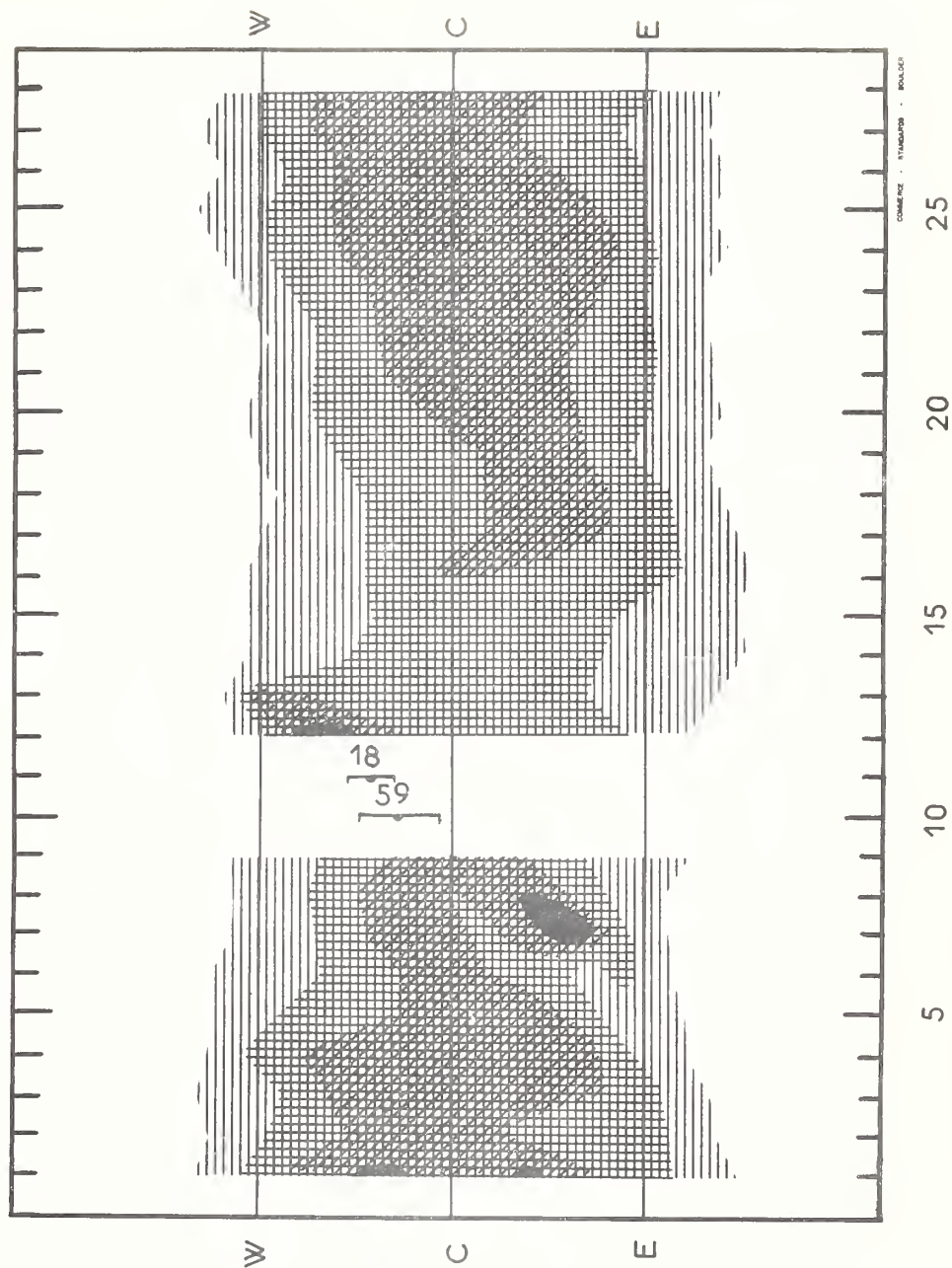
January 4, 6, 9, 16, 17,
 18, 20, 23, 24, 25,
 26, 27, 28, 30
 February 1, 7, 8, 9, 10,
 17, 19, 22
 March 5, 6, 8, 9, 11,
 16, 17, 18, 20, 21,
 23, 24, 30

SOLAR RADIO EMISSION INTERFEROMETRIC OBSERVATIONS

Nançay

FEBRUARY 1961

169 Mc



5 FEBRUARY 1961

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES
MARCH 1961

BOULDER

108 MC

Mar. 1961	Type	Start UT	Time of Maximum UT	Duration Minutes	Intensity
1	3	2007.7	2007.8	0.3	2
2	3	1429.9	1430.0	0.5	2
2	3	2258.6	2259.0	0.3	2
3	3	1926.0	1926.1	0.3	2
4	3	2349.8	2349.8	0.2	2
6	3	1558.6	1558.7	0.3	2
6	3	1911.3	1911.4	0.3	2
6	3	1928.6	1928.7	0.4	2
7	3	1741.1	1741.5	0.5	2
7	2	1858.0	1859.4	2.0	1
7	3	2241.0	2241.6	2.0	2
7	3	2355.8	2356.2	0.5	2
8	3	0026.2	0026.6	0.5	2
9	3	1732.6	1733.1	0.6	2
9	3	2314.7	2315.1	0.4	2
10	3	0039.6	0041.0	0.4	2
10	3	1447.5	1447.9	0.3	2
10	3	1821.2	1821.8	0.8	2
10	3	2308.5	2309.1	0.6	2
11	3	1407.2	1407.8	0.6	3
11	3	1727.5	1728.3	1.0	3
11	3	1807.2	1807.5	1.0	2
11	3	2040.1	2040.5	1.4	2
11	3	2312.5	2312.8	0.3	2
12	3	1945.2	1945.3	0.3	2
13	3	1939.5	1939.5	0.2	2
14	3	0015.7	0015.9	0.3	2
14	3	0024.6	0024.6	0.3	2
14	3	0026.7	0026.8	0.2	2
14	3	1412.5	1412.8	0.5	2
14	3	2001.8	2001.9	0.3	2
15	3	2218.9	2219.2	0.5	2
16	3	1642.8	1643.6	2.2	2
16	3	1738.5	1738.5	0.4	2
16	3	2231.0	2231.1	0.3	2

Mar. 1961	Type	Start UT	Time of Maximum UT	Duration Minutes	Intensity
17	3	1911.2	1911.6	2.0	2
19	3	1808.7	1809.2	0.5	2
19	3	1931.5	1831.9	0.4	2
21	3	1414.5	1415.0	1.0	2
21	3	2006.1	2006.5	0.5	2
22	3	0011.5	0012.0	0.5	2
22	3	0029.0	0029.7	1.0	2
22	3	1850.0	1850.5	0.7	2
22	3	2027.5	2028.3	0.8	2
23	7	1315	1618	370	3
23	3	2301.5	2302.1	0.8	2
23	2	2315.5	2318.2	2.6	2
24	3	0025.4	0025.9	0.5	2
24	6	1304 E	1346	244 D	2
24	7	2113		219	2
25	2	1430.5	1433.6	4.5	2
25	3	1454.0	1454.5	0.5	2
25	3	1733.0	1734.1	1.1	2
25	3	2020.6	2021.3	1.0	2
26	3	0007.5	0008.1	0.7	2
26	2	1641.0	1704.5	36	1
26	3	2116.6	2117.1	0.6	2
26	2	2220.0	2236.8	22	1
26	3	2350.7	2351.2	0.5	2
27	7	0008.7	0038.0	44	2
27	3	1428.4	1429.0	1.2	2
27	3	2136.3	2136.6	0.6	2
28	3	1654.2	1654.5	0.5	2
28	3	2255.0	2255.2	0.3	2
29	3	1712.7	1713.0	0.4	2
29	3	2015.6	2015.9	0.5	3
30	7	1748	2007	187	1
30	2	2147.0	2150.6	3.7	1
30	3	2310.0	2310.2	0.4	2
31	3	0049.8	0050.8	1.2	2
31	3	1304.2	1304.5	0.3	3
31	2	2242.0		44	1

COMMERCE - STANDARDS - BOULDER

NOMINAL TIMES OF OBSERVATION

MARCH 1961

BOULDER

108 MC

Mar. 1961	U.T.		Mar. 1961	U.T.	
1	1340-0036		16	1317-0052	I 2333-0052
2	1338-0038		17	1315-0053	
3	1755-2340		18	1315-1404	
4	1506-0010		19	1602-0055	
5	1334-0042		20	1405-0001	
6	1332-0042		21	1308-1355;	
7	1331-0044			1405-0057	
8	1329-0044		22	1307-0058	
9	1328-1447;		23	1305-0059	
	1456-0046		24	1304-0100	
10	1326-1610;		25	1302-0102	
	1647-0046		26	1300-0102	
11	1325-0048		27	1259-0104	
12	1600-1650;		28	1553-2145;	
	1705-0050			2241-0104	
13	1321-0050		29	1255-0106	
14	1320-0052		30	1254-0106	
15	1318-0052		31	1252-0108	

COMMERCE - STANDARDS - BOULDER

SOLAR RADIO EMISSION SPECTRUM OBSERVATIONS

IVd

OCTOBER 1960

Fort Davis

25-580 Mc

Date 1960	Observing Hours	Important Bursts			Frequency Range	Remarks
		Type	Times U.T.	Int.		
Oct. 1	0000-0025 1320-2400					
Oct. 2	0000-0020 1320-2400					
Oct. 3	0000-0020 1320-2400	III G I	1443-1446 ~1800-2400	1- 1-	240-25 300-100	
Oct. 4	0000-0020 1320-2400	I	~2000-2400	1	180-320	
Oct. 5	0000-0020 1320-2400	I I	0000-0010 ~1800-~2400	1 1-	300-180 300-180	
Oct. 6	0000-0015 1320-2400	III G III G III G	1916-1918 2014-2026 2337-2340	2 1-3 2	350-25 580-25 180-50	
Oct. 7	0000-0015 1320-2400	III G III G III G	1944-1947 1948-1951 2352-1354	1 3 2	200-30 350-25 320-50	~2300: Start of weak Type I
Oct. 8	0000-0015 1320-2400	I	1320-2400	2	320-50	Many III 100-25 Mc/s throughout day.
Oct. 9	0000-0015 1320-2400	I I III G III G III G	0000-0010 1320-2400 1619-1621 2136-2139 2358-2400	1- 2 2 3 1	280-100 350-75 580-25 580-25 200-100	
Oct. 10	0000-0010 1330-2400	I I III G III G III G III G III G III G III G	0000-0005 1330-2400 1422-1433 1448-1458 1529-1539 1842-1849 1918-1933 1954-1957 2317-2319	1- 2 1-3 1-3 1-2 1-3 1-3 3 2	300-150 350-25 500-25 500-25 580-25 400-25 500-25 350-25 580-240	2318: Reverse Slopes, 500-250 Mc/s.
Oct. 11	0000-0010 1330-2400	I I III G III G III G III G III G III G III G III G III G	0000-0005 1330-~2100 1631-1633 1636-1641 1752-1756 1803-1806 1847-1849 1939-1941 1943-1945 2004-2007 2013-2014	1 1 3 2 2 3+ 3 2-3 2-3 1-2 2	100-180 300-100 300-25 300-25 90-25 580-25 300-25 300-25 500-25 580-25 240-25	~1600 Type I intensity decrease to 1-
Oct. 12	0000-0010 1330-2400	III G III G II IVxx	1646-1649 1745-1749 1749.7-1751.2 1751.5-1802 1753-1759	1-2 2 2 3 3	200-25 580-50 280-180 280-40 400-150	Weak I throughout day. IVxx: Continuum with Type III structure.
Oct. 13	0000-0005 1330-2400	II	1904.6-1906.5	2	180-50	
Oct. 14	0000-0005 1330-2400	III G III G Uncl. Uncl. III G	1557-1559 2117-2118 2119-2120 2124-2131 2341-2342	2 2 2 1 3	350-150 350-30 180-50 400-50 240-30	2119-2131 Uncl. Resembles IV.
Oct. 15	1330-2400	III G	1414-1422	1-3	180-50	
Oct. 16	1330-2400	III G III G III G III G	1408-1411 1825-1826 1928-1930 2029-2032	1-2 1-3 3+ 1-3	350-50 580-220 300-25 580-25	Weak I during day.

SOLAR RADIO EMISSION SPECTRUM OBSERVATIONS

OCTOBER-NOVEMBER 1960

Fort Davis

25-580 Mc

Date 1960	Observing Hours	Important Bursts			Frequency Range	Remarks
		Type	Times U.T.	Int.		
Oct. 17	1330-2400	III G	1453-1455	1-3	500-25	
		III G	1704 1709	1-3	200-25	
Oct. 18	1330-2400	III G	1625-1630	2	300-25	Many III throughout day.
		I	~1640-~1800	1	250-100	
		III G	1957-1959	2	240-25	
		III G	2148-2153	1	150-50	
		I	2158-~2330	1	180-50	
Oct. 19	1330-2400	I	1330-2350	1-2	350-50	Many III 100-25 Mc/s throughout day.
		III G	1420-1429	1-2	350-25	
		III G	1608-~1840	1-3+	500-25	
Oct. 20	1330-2400	III G	1446-1448	3	500-25	
		III G	1449-1452	1-2	500-25	
		III G	1453-1454	3+	580-25	
		III G	1714-1715	3+	350-25	
Oct. 21	1330-2400					Weak I, Many III throughout day.
Oct. 22	1330-2355	III G	1348-1353	2	280-50	Weak I throughout day.
		III G	1356-1401	2	450-50	
Oct. 23	1330-2355	III G	2100-2104	1-2	580-200	
Oct. 24	1330-2350	I	1330-~1825	1-	350-100	Weak I during day.
		III G	2008-2011	2	350-50	
		III G	2147-2156	1-2	300-50	
Oct. 25	1330-2350					
Oct. 26	1330-2350					
Oct. 27	1330-2350					
Oct. 28	1330-2350					
Oct. 29	1345-2345	III G	1401-1405	2	450-50	Weak I throughout day ~ 320- ~ 100 Mc/s.
		III G	1528-1531	2	180-50	
		III G	1656-1706	1-3	400-25	
		III G	1710-1712	2	150-25	
		III G	1904-1907	1	180-35	
		III G	1939-1940	2	180-25	
		III G	2046-2052	1-3	350-25	
		III G	2054-2056	2	350-50	
Oct. 30	1345-2345	III G	1533-1535	2	350-25	Weak I throughout day ~ 320- ~ 180 Mc/s.
		I	2020-~2100	1	350-100	
Oct. 31	1345-2345	III G	2200-2202	1-3	280-25	
Nov. 1	1345-2345	I	1345-2337	1	320-100	
Nov. 2	1345-2345					
Nov. 3	1345-2340					
Nov. 4	1345-2340					
Nov. 5	1345-2340	III G	2123-2125	2	280-25	
		III G	2155-2159	3	280-25	
Nov. 6	1345-2340	II	1840.2-1840.6	2	50-40	~2130-2340 Weak I
			1843-1850	2	70-35	
Nov. 7	1345-2340					
Nov. 8	1345-2340					Weak I throughout day.
Nov. 9	1345-2340	III G	1350-1352	2	240-100	Weak I throughout day.
		III G	2225-2227	2-3	420-110	
Nov. 10	1345-2340	I	1345-~2120	2-3	300-25	
		I	~2300-2335	1-2	300-100	
Nov. 11	1345-2340	I	1345-2340	2-3	300-25	Many III 50-25 Mc/s throughout day.

SOLAR RADIO EMISSION SPECTRUM OBSERVATIONS

IVf

NOVEMBER- DECEMBER 1960

Fort Davis

25-580 Mc

Date 1960	Observing Hours	Important Bursts			Frequency Range	Remarks
		Type	Times U.T.	Int.		
Nov. 12	1345-2335	IV ^{XX} I	1345-~1800 ~1700-2335	2-3 2-3	580-50 300-25	IV ^{XX} continuum with Type III structure, degenerates into I at ~1700 2027: reverse slopes. 350-240 Mc/s.
Nov. 13	1345-2335	III G III G	1515-1516 1637-1638	2 2	560-100 500-330	
Nov. 14	1345-2335					
Nov. 15	1345-2335					
Nov. 16	1345-2335	III G III G	1545-1551 1936-1937	1-3 1-2	500-180 240-90	
Nov. 17	1345-2335	III G	1647-1648	2	320-25	
Nov. 18	1345-2335					
Nov. 19	1345-2335	III G III G IV ^{XX} IV ^{XX} IV III G III G	1453-1455 1559-1602 1636-1653 1659-1702 1708-1723 1659-1701 1742-1754	1 2 2 3 1-2 3 1-2	500-50 280-25 400-200 450-220 320-220 150-25 300-40	IV ^{XX} continuum with Type III structure.
Nov. 20	1345-2335	II IV Uncl.	2028.4-2035 2027-2046 2041-2043	3 2 3+	125-30 580-60 60-25	
Nov. 21	1345-2335					
Nov. 22	1345-2335					Weak I during day.
Nov. 23	1345-2335	III G III G III G III G	1426-1429 1629-1632 1820-1828 2053-2056	2 1-3+ 1-3 1-3	280-50 450-25 500-25 450-25	Weak I during day.
Nov. 24	1345-2335	III G	2048.5-2050	2	450-30	
Nov. 25	1400-2335					Weak I during day.
Nov. 26	1400-2335	III G III G	1603-1604 1738-1744	2 1-2	300-100 300-25	
Nov. 27	1400-2335	IV II Uncl.	1509-1513 1522.7-1526 1518-1520	3 3 1	580-150 75-50 80-60	
Nov. 28	1400-2335					
Nov. 29	1400-2335					
Nov. 30	1400-2335					
Dec. 1	1400-2335	I III G	1400-2335 2018-2020	1-2 2	400-100 320-100	
Dec. 2	1400-2335	III G	1608-1609	2	400-100	Weak I throughout day.
Dec. 3	1400-2340	III G III G III G	2042-2044 2047-2048 2305-2306	3 2 2	400-25 450-30 400-100	2047: Reverse slopes 350-280 Mc/s.
Dec. 4	1400-2340	III G I	1455-1457 2120-2335	1 2-3	300-50 450-50	
Dec. 5	1400-2340	III G II IV ^{XX} III G	1510-1512 1833.5-1850 1834-1858 2021-2023	2 3 3 1	500-50 125-25 580-25 280-100	
Dec. 6	1400-2340	III G III G III G III G	1722-1725 1837-1843 2026-2032 2326-2328	1-3 2-3 1-3+ 2	500-25 200-25 500-25 350-50	Weak I throughout day.

SOLAR RADIO EMISSION SPECTRUM OBSERVATIONS

DECEMBER 1960

Fort Davis

25-580 Mc

Date 1960	Observing Hours	Important Bursts			Frequency Range	Remarks
		Type	Times U.T.	Int.		
Dec. 7	1400-2340	III G	1954.5-1956	3	350-25	Weak I throughout day.
		III G	2028-2030	2	350-25	
Dec. 8	1400-2340	II	1604.4-1610	2	170-35	Weak I throughout day.
Dec. 9	1400-2340					Weak I during day.
Dec. 10	1636-2340					
Dec. 11	1413-2340					
Dec. 12	1400-2340					
Dec. 13	1400-2340					
Dec. 14	1400-2340					
Dec. 15	1420-2340					
Dec. 16	1420-2340	II	1531.5-1548	3	130-50	
Dec. 17	1420-2340	III G	1721-1722	2	350-180	
Dec. 18	1420-2340	III G	1432-1444	2-3	500-30	
		III G	1914-1916	2	300-25	
		III G	2152-2154	2	400-25	
		III G	2254.5-2302	1-3	320-25	
		III G	2308-2310	2	350-25	
Dec. 19	1420-2340	III G	1551-1553	1-2	320-25	
		III G	1558-1601	1	300-50	
		III G	2025.5-2027	2	300-25	
		III G	2119-2120	2	450-25	
		III G	2142-2145	3	450-25	
		III G	2257-2259	2	400-45	
Dec. 20	1420-2345					
Dec. 21	1420-2155					Weak I throughout day.
Dec. 22	1420-2345	III G	1932-1938	1-3+	450-25	
		III G	2034-2035	2-3+	500-25	
Dec. 23	1420-2345					
Dec. 24	1420-2345					
Dec. 25	1420-2345					
Dec. 26	1420-2345	III G	1447-1450	3	580-25	
Dec. 27	1420-2345					
Dec. 28	1420-2345					Weak I throughout day.
Dec. 29	1420-2350					Weak I throughout day.
Dec. 30	1420-2350	I	~1800-2345	1	50-250	
Dec. 31	1420-2350					

COMMERCE - STANDARDS - BOULDER

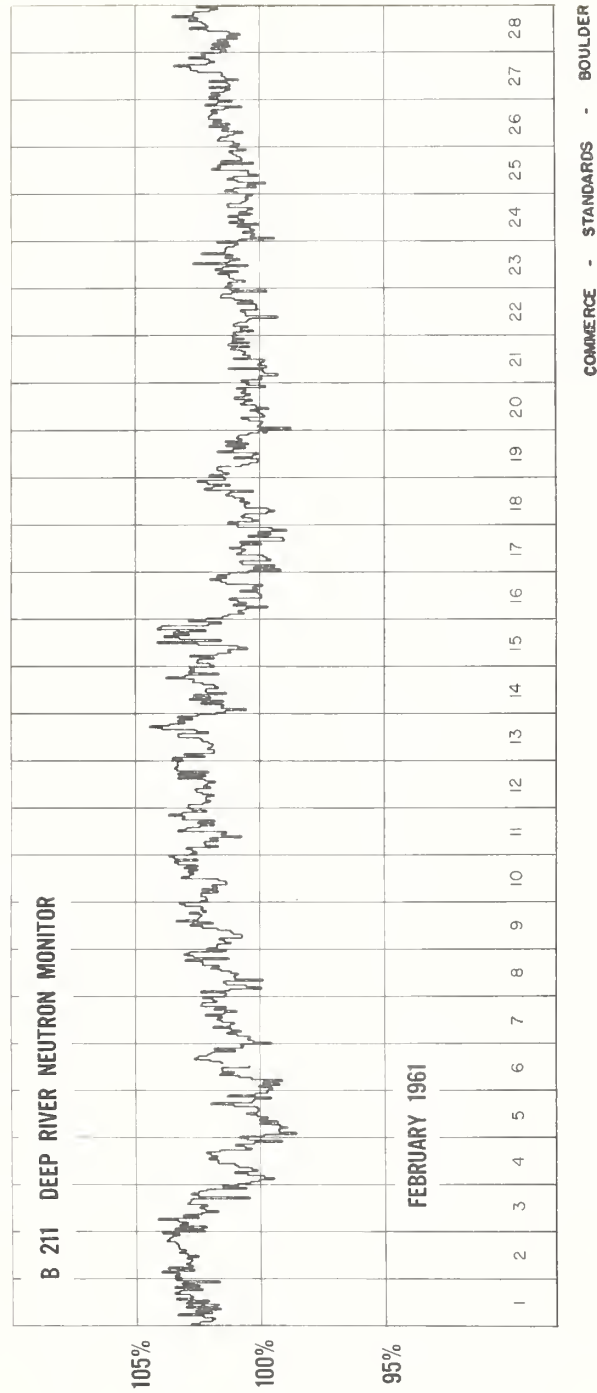
COSMIC RAY INDICES

(Climax Neutron Monitor)

Feb. 1961	Daily average counts/hr	Feb. 1961	Daily average counts/hr
1	2983.3	15	2990.3
2	2982.0	16	2945.3
3	2969.7	17	2935.7
4	2960.8	18	2996.1
5	2945.9 12*	19	2966.7
6	2965.8 10*	20	2963.2
7	2965.7	21	2961.0
8	2971.6	22	2972.9
9	2973.5	23	2975.0
10	2961.9	24	2956.5
11	2955.8	25	2960.0
12	2980.0	26	2977.0
13	2997.2	27	2980.0
14	2977.9	28	2990.0

*Hours of A-section data plus hours of B-section data.

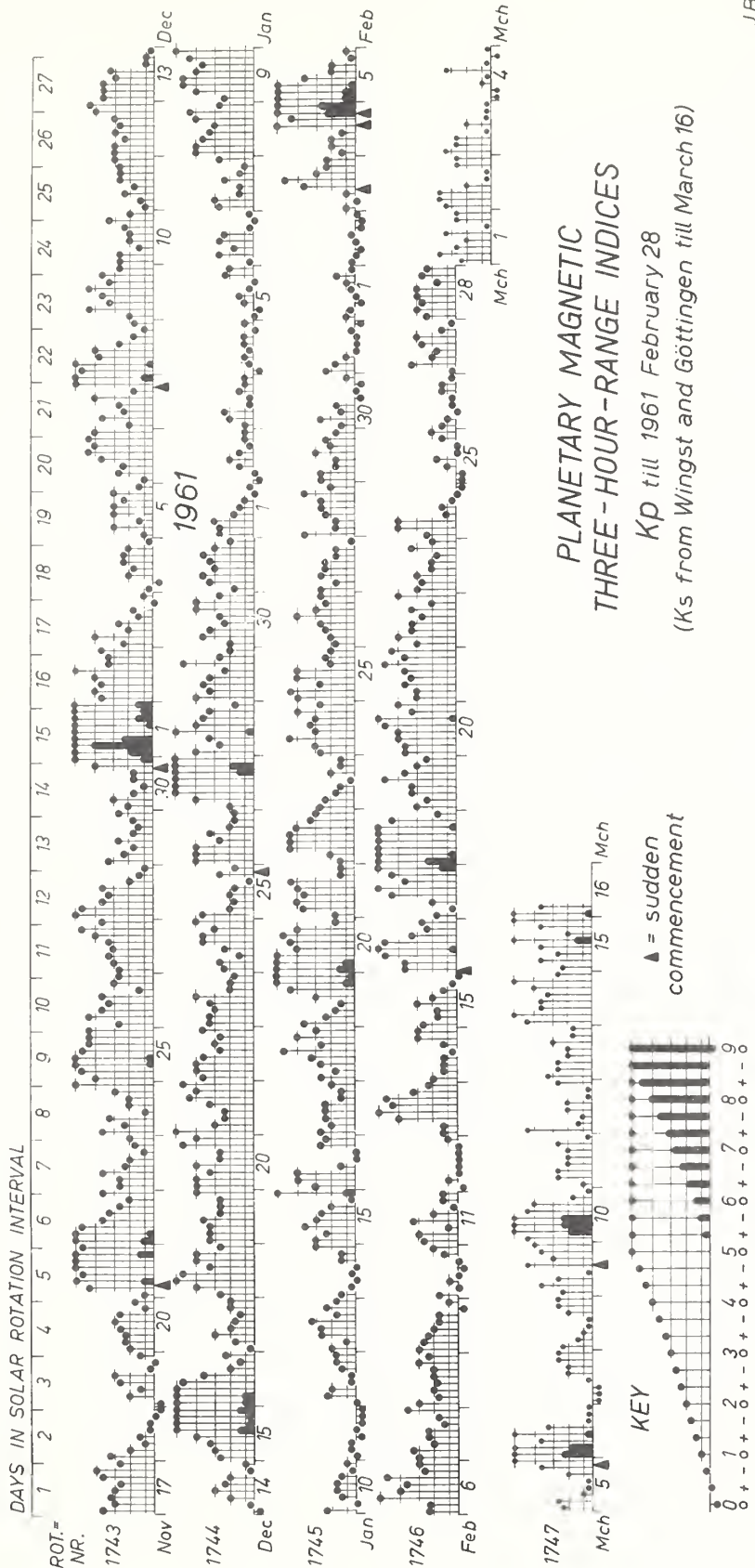
COSMIC RAY INDICES
(Pressure Corrected Hourly Totals)



GEOMAGNETIC ACTIVITY INDICES

FEBRUARY 1961

Feb. 1961	C	Values Kp								Sum	Ap	Final Selected Days	
		Three hour Gr. interval											
		1	2	3	4	5	6	7	8				
1	0.0	1o	1-	0o	0+	1-	1o	2-	1-	6o	3	Five Quiet	
2	0.0	1-	0+	0o	0+	1-	0o	0o	0+	2+	2		
3	0.9	1o	0+	1o	4-	5-	3o	2+	2+	18+	13		
4	1.5	1+	2o	2o	1+	5o	4+	7-	7o	30-	43		
5	1.2	6-	6-	5+	4-	2o	2o	1-	1o	26o	29		
6	1.2	2+	2+	5o	4o	4-	5-	3-	3o	28-	23	12	
7	0.6	3o	3+	2o	2+	2+	1+	2-	4-	20-	11	25	
8	0.4	3o	2-	2o	2-	2o	2o	3o	2+	18-	9	26	
9	0.2	3o	3-	2+	2o	2-	2-	0o	1o	14+	7		
10	0.0	2-	0+	1o	0+	0o	0+	1+	2o	7o	4		
11	0.3	3-	3o	1o	3+	2o	1-	1+	1+	15+	9	Five Disturbed	
12	0.0	0o	1o	0+	0+	0+	0+	0+	1o	4-	2		
13	1.3	1+	1+	4o	5o	4+	5-	3+	2+	26+	23		
14	0.6	2o	1+	1+	1+	1-	1+	3o	3o	14o	8		
15	0.3	3-	2-	2-	3o	2o	1+	1-	0+	13+	7		
16	1.2	4-	4-	5-	5+	5-	3+	2+	3-	30+	27	16	
17	1.3	2-	1-	2o	4+	5o	4-	4+	6o	28-	29	17	
18	1.4	7-	5+	5o	5o	5o	5+	4+	2-	38+	51	18	
19	1.0	3o	2+	3+	3+	5-	4-	3o	2+	26-	18	20	
20	1.2	4-	4-	4o	4o	5-	5+	3+	4o	33-	30		
21	1.1	3o	3o	4-	3+	4-	5-	4-	4+	29+	23	Ten Quiet	
22	0.8	3o	4o	3+	3+	3-	3+	2o	4o	26-	18		
23	0.5	3o	3-	3o	2o	2o	2-	3+	2o	20-	11		
24	0.3	2+	4o	4o	1o	1+	1-	0+	0o	14-	10		
25	0.1	0o	0o	1o	2-	0+	0+	1+	2o	7-	3		
26	0.0	1+	1o	0+	1-	1-	1+	1+	1-	7+	4	9	
27	0.3	1-	3+	2o	2-	3-	3o	1+	1-	15+	9	10	
28	0.7	2+	3o	3-	3o	3o	2-	3-	2+	21-	12	11	
Mean:		0.66								Mean:	16		12
												14	
												15	
												25	
												26	



COMMERCE - STANDARDS - BOULDER

CRPL RADIO PROPAGATION QUALITY FIGURES AND FORECASTS
NORTH ATLANTIC FEBRUARY 1961 NORTH PACIFIC

DATE	NORTH ATLANTIC 6-HOURLY QUALITY FIGURES				SHORT-TERM FORECASTS ISSUED ABOUT ONE HOUR IN ADVANCE OF				ADVANCE FORECASTS (1-2-REPORTS) FOR WHOLE DAY, ISSUED IN ADVANCE BY				GEOMAGNETIC K _p		NORTH PACIFIC 12-HOURLY QUALITY FIGURES				SHORT-TERM FORECASTS ISSUED AT		WHOLE DAY INDEX		ADVANCE FORECASTS (1-2-REPORTS) FOR WHOLE DAY, ISSUED IN ADVANCE BY				GEOMAGNETIC K _s						
	00 06 12 18				00 06 12 18				1-7 1-7 1-3 1-7 DAYS DAYS DAYS DAYS FINAL JFS SOW Jp				1-7 1-7 1-3 1-7 DAYS DAYS DAYS DAYS FINAL JFS SOW Jp		1-7 1-7 1-3 1-7 DAYS DAYS DAYS DAYS FINAL JFS SOW Jp		0700 1900 TO TO 1900 0700				0600 1800		1-7 1-7 1-3 1-7 DAYS DAYS DAYS DAYS FINAL JFS SOW Jp		1-7 1-7 1-3 1-7 DAYS DAYS DAYS DAYS FINAL JFS SOW Jp								
	00	06	12	18	00	06	12	18	00	06	12	18	00	06	12	18	00	06	12	18	00	06	12	18	00	06	12	18	00	06	12	18	
FEB 1961																																	
01	60	6-	7-	6+	6	5	7	6	60	6	5	5	6	6	1	1	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
02	5+	6-	6+	6+	6	5	6	6	6-	5	5	6	5	5	2	3	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
03	60	5+	7-	60	6	5	6	5	60	5	5	6	5	5	2	3	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
04	6+	60	6+	4+	5	5	6	6	6-	5	5	6	6	6	(4)	1	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
05	3+	3+	50	5-	5	3	5	5	(4-)	6	6	6	6	6	(4)	1	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
06	40	4+	6+	6-	5	4	6	6	5-	6	6	6	6	6	3	3	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
07	5+	5-	7-	60	5	5	6	6	6-	6	6	6	6	6	2	2	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
08	50	4+	60	5+	6	5	6	6	50	6	6	6	6	6	2	2	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
09	60	4+	7-	6+	5	5	6	6	6-	6	6	6	6	6	3	1	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
10	60	4+	7-	6+	6	5	6	6	5+	6	6	6	6	6	0	1	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
11	6-	5+	6+	6+	6	5	6	6	6-	6	6	6	6	6	2	1	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
12	6-	5-	7-	60	6	5	6	7	6-	6	6	6	6	6	0	0	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
13	60	4+	6-	50	6	5	5	5	5+	6	6	6	6	6	3	3	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
14	4-	3-	6+	6-	(4+)	5	5	6	(4+)	5	5	6	6	6	3	2	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
15	6-	4+	7-	6+	6-	5	6	6	6-	5	5	6	6	6	2	1	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
16	6-	40	5-	50	5-	6	5	5	5-	6	6	6	6	6	(4)	3	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
17	3+	3-	6-	6-	4	3	5	5	(40)	6	6	6	6	6	2	(4)	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
18	2+	2-	4-	30	(3-)	4	2	4	(3-)	4	4	6	6	6	(5)	3	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
19	3+	2-	6-	50	(3+)	5	5	4	(3+)	5	5	6	6	6	3	3	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
20	3+	3-	6-	50	(4-)	5	5	5	(4-)	5	5	6	6	6	(4)	(4)	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
21	4+	3+	6-	50	(4+)	4	3	6	(4+)	5	5	6	6	6	3	3	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
22	4+	3+	6-	6-	(4+)	5	4	6	(4+)	5	5	6	6	6	3	3	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
23	5-	40	7-	6-	50	5	4	6	50	5	5	6	6	6	3	2	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
24	5-	4-	60	60	50	5	4	6	50	5	5	6	6	6	3	1	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
25	6-	4+	7-	60	5+	5	4	6	5+	5	5	6	6	6	1	1	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
26	60	4+	7-	6+	6	5	6	6	5+	6	6	6	6	6	1	1	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
27	6-	6-	70	7-	6	5	7	6	6+	6	6	6	6	6	2	2	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
28	6+	6-	7-	6+	6	5	7	6	6+	6	6	6	6	6	3	2	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
Score: Quiet Periods	P	13	4	13	19	10	10	10	10	10	10	10	10	10	13	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
	S	6	5	14	7	10	10	10	10	10	10	10	10	10	8	9	8	9	8	9	8	9	8	9	8	9	8	9	8	9	8	9	8
	U	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
	F	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
Disturbed Periods	P	2	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S	5	11	0	0	5	1	0	0	5	1	0	0	0	6	5	6	5	6	5	6	5	6	5	6	5	6	5	6	5	6	5	6
	U	2	0	0	1	1	0	0	1	1	0	0	0	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0
	F	0	0	0	1	2	7	0	1	2	7	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

() Represent disturbed values.

All times are Universal Time (U.T.)

COMMERCE - STANDARDS - BOULDER

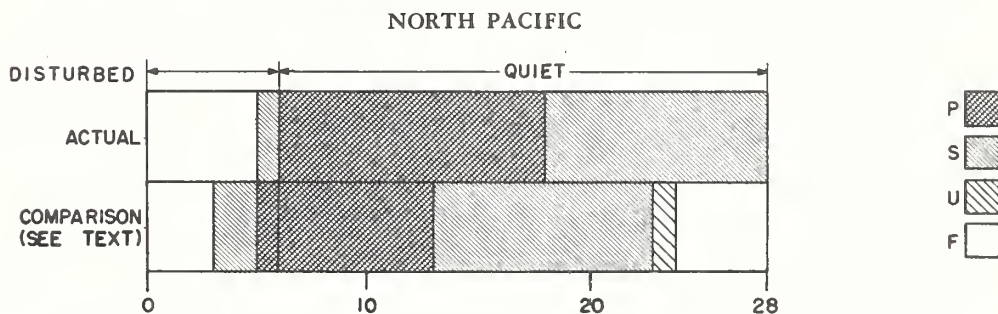
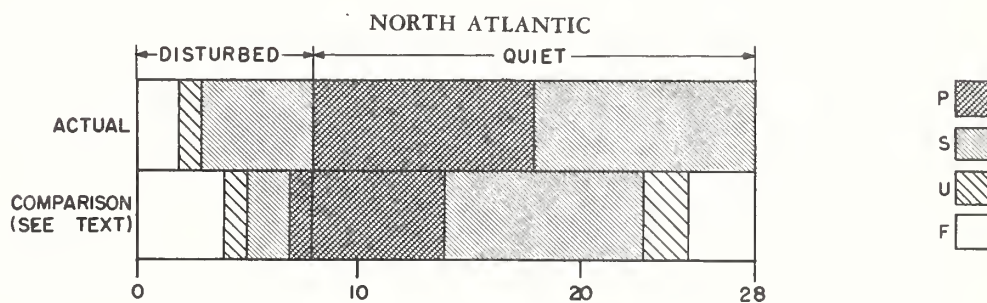
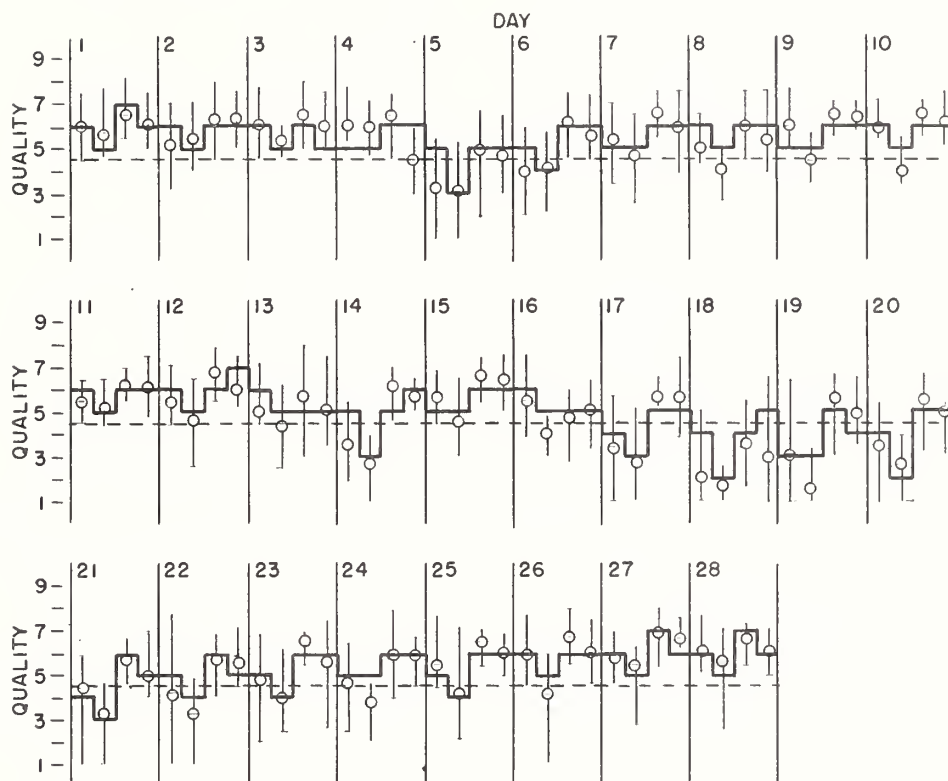
NORTH ATLANTIC

FEBRUARY 1961

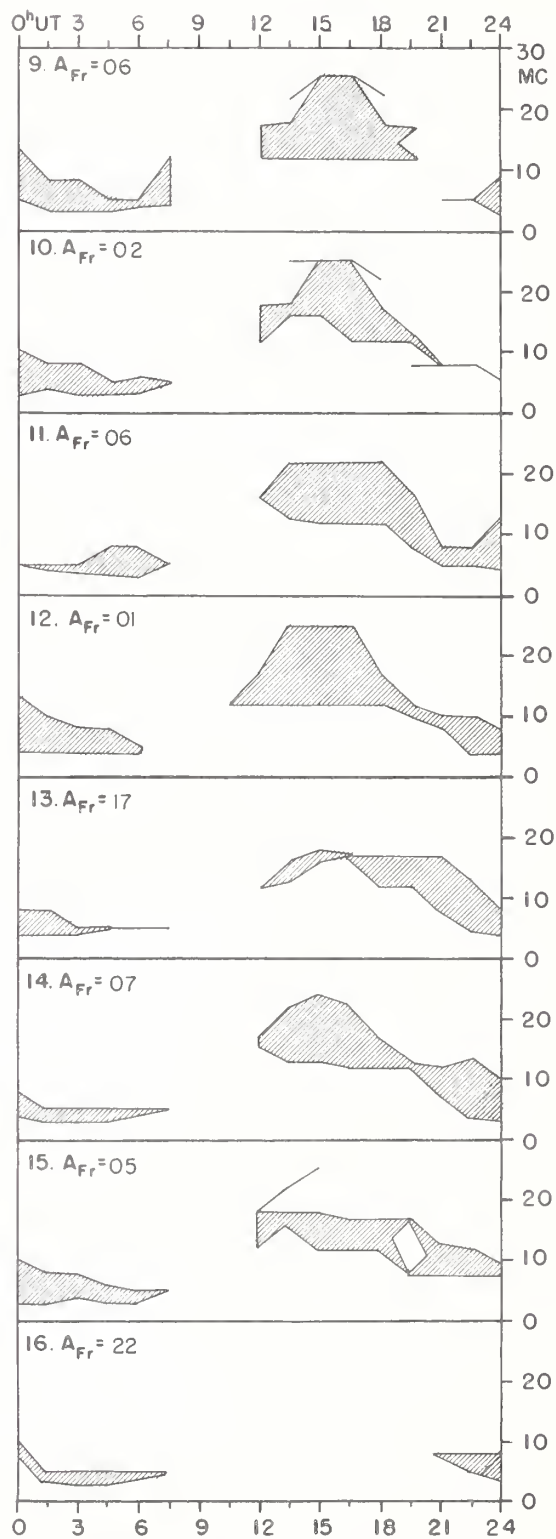
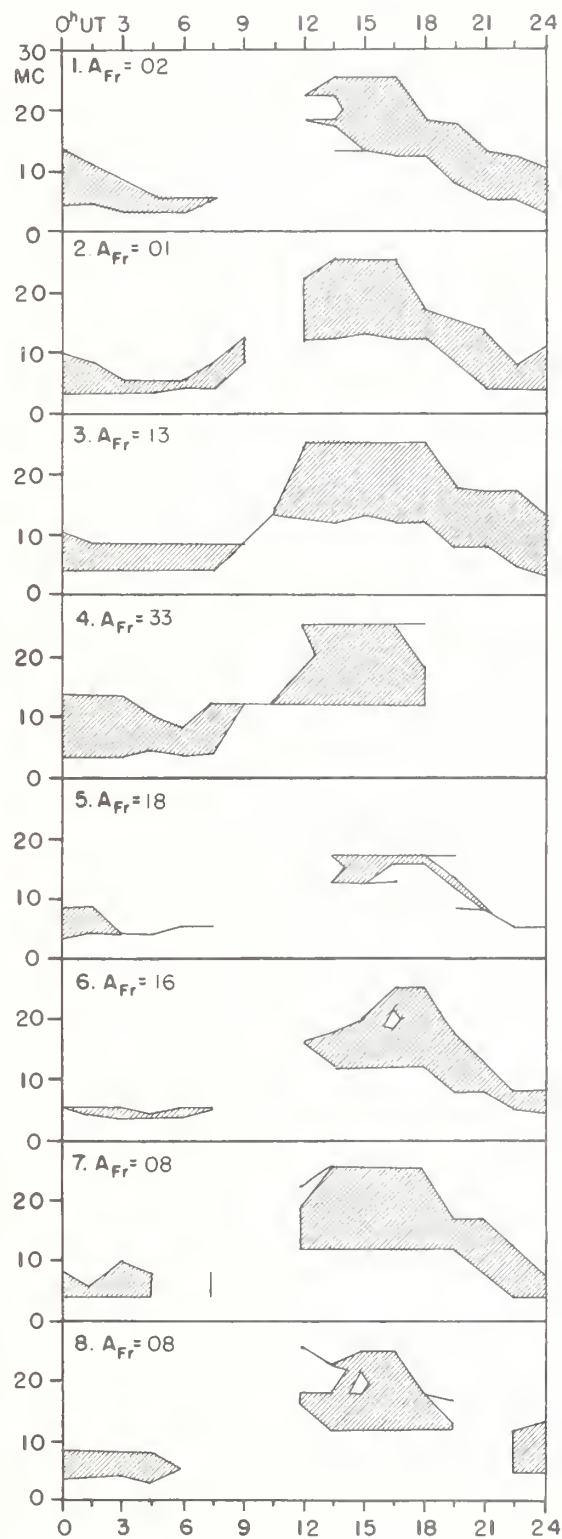
— Short-term forecast

○ Quality figure

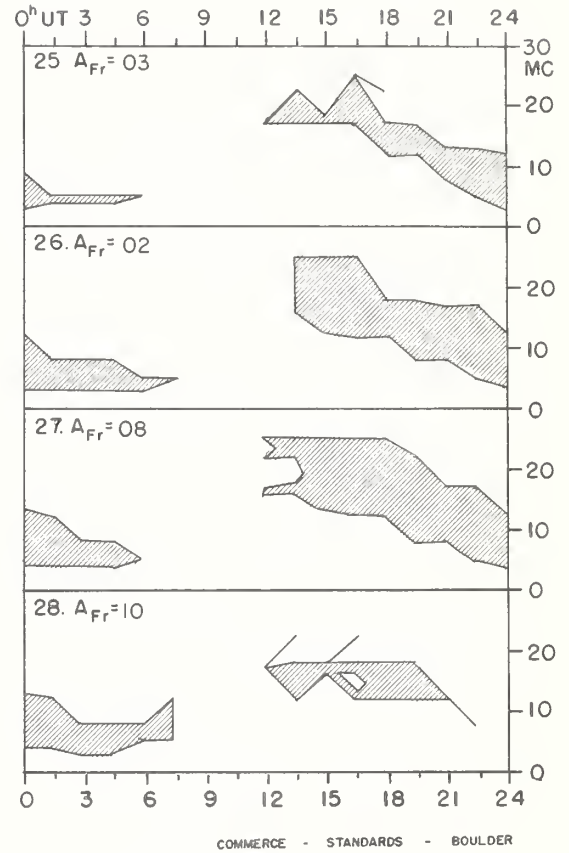
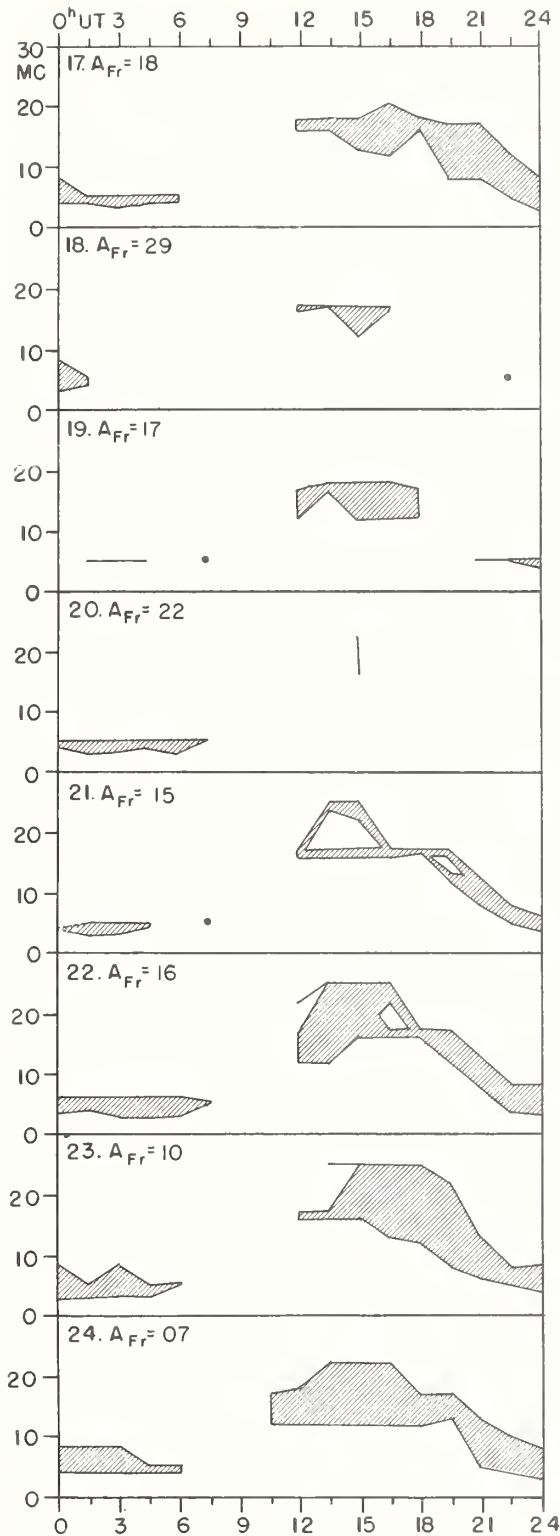
| Range of reports



FEBRUARY 1961



COMMERCE - STANDARDS - BOULDER



Adapted from Observations by Deutsches Bundespost

ALERT PERIODS AND SPECIAL WORLD INTERVALS

INTERNATIONAL WORLD DAY SERVICE

MARCH 1961

Issued Day/Time UT Mar. 1961	Advance Geophysical Alert	No.	World-Wide Geophysical Alert	Special World Interval
06/0255	Ft. Belvoir, Magnetic Storm 05/2100Z			
06/1600		110	Magnetic Storm 05/21XXZ	Start Special World Interval
07/1600	Ft. Belvoir, Magnetic Storm 09/13XXZ	111		Finish Special World Interval
10/1015				
10/1600		112	Magnetic Storm 09/1237Z	
19/1600		113	Magnetic Storm 19/04XXZ	
27/1600		114	Magnetic Storm 27/1505Z	Start Special World Interval
27/1600		115		Finish Special World Interval

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